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target host cell, wherein the expression of the indicator gene is dependent upon the patient-derived segment; and

(d) comparing the expression of the indicator gene from (c) with the expression of the indicator gene measured when steps (a)-(c) are carried out in the absence of the anti-HCV drug,

wherein a test concentration of the anti-HCV drug is present at steps (a)-(c); at steps (b)-(c); or at step (c) and a change in expression of the indicator gene in (c), as compared to (d), relates to susceptibility of HCV replication to the anti-HCV drug.

37. (Amended) A method for determining susceptibility of hepatitis C viral replication to an anti-hepatitis C virus (HCV) drug comprising:

- (a) introducing a resistance test vector comprising a patient-derived segment which comprises a hepatitis C virus (HCV) gene and a nonfunctional indicator gene into a host cell;
- (b) culturing the host cell from (a);
- (c) measuring expression of the indicator gene in a target host cell, wherein the expression of the indicator gene is dependent upon the patient-derived segment; and
- (d) comparing the expression of the indicator gene from (c) with the expression of the indicator gene measured when steps (a)-(c) are carried out in the absence of the anti-HCV drug,

wherein a test concentration of the anti-HCV drug is present at steps (a)-(c); at steps (b)-(c); or at step (c) and a change in expression of the indicator gene in

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E2. (c), as compared to (d), relates to susceptibility of HCV replication to the anti-HCV drug.

E3. 55. (Amended) A method for determining resistance of hepatitis C virus (HCV) to an anti-HCV drug in a patient comprising:

- (a) developing a standard curve of drug susceptibility for the anti-HCV drug;
- (b) determining susceptibility of HCV replication to such anti-HCV drug in the patient according to the method of claim 1; and
- (c) comparing the anti-HCV drug susceptibility from step (b) with the standard curve from step (a), wherein a decrease in susceptibility of HCV replication to the anti-HCV drug indicates development of resistance to the anti-HCV drug in the patient.

56. (Amended) A method for determining resistance of hepatitis C virus (HCV) to an anti-HCV drug in a patient comprising:

- (a) developing a standard curve of drug susceptibility for such anti-HCV drug;
- (b) determining susceptibility of HCV replication to such anti-HCV drug in the patient according to the method of claim 37; and
- (c) comparing the anti-HCV drug susceptibility from step (b) with the standard curve from step (a), wherein a decrease in susceptibility of HCV replication to the anti-HCV drug indicates development of resistance to the anti-HCV drug in the patient.

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57. (Amended) A method for determining resistance of hepatitis C virus (HCV) to an anti-HCV drug in a patient comprising:

- Handwritten: E3, F3, (b), (c)*
- (a) determining susceptibility of hepatitis C viral replication in the patient to the anti-HCV drug at a first time according to the method of claim 1, wherein the patient-derived segment is obtained from the patient at about said time;
 - (b) determining susceptibility of hepatitis C viral replication of the same patient to the anti-HCV drug at a later time; and
 - (c) comparing the anti-HCV drug susceptibilities from steps (a) and (b), wherein a decrease in susceptibility of HCV replication to the anti-HCV drug at the later time as compared to the first time indicates development or progression of resistance to the anti-HCV drug in the patient.

58. (Amended) A method for determining resistance of hepatitis C virus (HCV) to an anti-HCV drug in a patient comprising:

- (a) determining susceptibility of hepatitis C viral replication in the patient to the anti-HCV drug at a first time according to the method of claim 37, wherein the patient-derived segment is obtained from the patient at about said time;
- (b) determining susceptibility of hepatitis C viral replication of the same patient to the anti-HCV drug at a later time; and
- (c) comparing the anti-HCV drug susceptibilities from steps (a) and (b), wherein a decrease in susceptibility of HCV replication to the anti-HCV drug at the later time as compared to the first time indicates development or progression of resistance to the anti-HCV drug in the patient.